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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,630	10/19/2004	Takanori Shimizu	NE297-PCT (US)	4085
21254	7590	08/31/2005	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			CHIEM, DINH D	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/511,630

Applicant(s)

SHIMIZU ET AL.

Examiner

Erin D. Chiem

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/7/04 10/19/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office action is in response to the amendment of claims filed on 19 October 2004.

Claim 2 is canceled and claims 1, and 3-12 are pending.

#### ***Specification***

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the current abstract is not a clear and concise summary of the invention. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: the ordinal number "fourth" is misspelled through out the Specification.

Appropriate correction is required.

#### *Claim Objections*

2. Claim 1 is objected to because of the following informalities: on line 12, the recitation "an outside" is unclear. Appropriate correction is required.

For the purpose of examination, the unclear recitation of "an outside" will not be considered

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, and 3-8, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura et al. (US 6,343,171 B1).

Regarding claim 1, Yoshimura teaches an optoelectronic hybrid integrated module comprising an optical device (Fig. 1; 10) for converting an optical signal into an electric signal and vice versa (col. 5, line 40- col. 6, line 27); an input/output IC 1a for drive controlling the optical device; and a transparent base 10 material having electric wiring and light permeability (col. 5, line 17-39); wherein the optical device and the input/output IC are flip-chip mounted on the transparent base material, the electric wiring electrically connects the optical device and the input/output IC so as to transfer an electric signal between them, and the electric wiring position on a surface opposite to a surface where the optical device is mounted is provided as a ground electrode and serves as an electromagnetic shield for the optical device and the input/output IC (Fig. 2 and col. 7, line 65-col. 8, line 1).

Regarding claims 3 and 7, Figures 9,10, and 22-30 teaches the coupling of a light emitting device (exemplary reference numeral 28c) of the optical device 10 is coupled to waveguide 24f and into the optical device 10.

Regarding claim 4, the optical device is configured as a light receiving device that converts an optical signal into an electric signal (col. 5, line 40-col. 6, line 27) and the input/output IC is configured as an electric amplifier IC that amplifies an electric signal from the light receiving device (col. 10, lines 15-23).

Regarding claims 5-6, and 8 in Figure 73, Yoshimura teaches the transparent plate is flexible sheeting transmitting a light, having high permeability to a wavelength of the optical device.

Regarding claim 11, see Figure 32 for the holding frame with reference numeral 235.

Regarding claim 12, all of the limitations are met in the above rejection and furthermore, the logic LSI chip is mounted on the same substrate, see Figure 114 and column 51, line 10.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura in view of Nishiwaki et al. (US 5,200,939).

Yoshimura teaches an optoelectronic hybrid integrated module for converting electric signal to optical signal and vice versa comprising an input/output IC for drive-controlling the optical device wherein the optical device and the input/output IC is mounted on a flexible transparent substrate with electric wiring connecting on the back surface of the substrate and Yoshimura further teaches a light emitter integrated upon the substrate.

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However, Yoshimura does not teach the base substrate includes an optical axis converter that converts a direction of the optical axis with reference to the light coupling means.

Nishiwaki teaches light emitting through the substrate wherein the polarization of the optical signal is rotated (Abstract) for the purpose of providing a uniform polarized radiation.

**The motivation** is to provide a uniformed polarized radiation such as in the application of a thin film optical head taught by Nishiwaki.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura in view of Sizer, II et al. (US 5,416,872).

Yoshimura teaches an optoelectronic hybrid integrated module for converting electric signal to optical signal and vice versa comprising an input/output IC for drive-controlling the optical device wherein the optical device and the input/output IC is mounted on a flexible transparent substrate with electric wiring connecting on the back surface of the substrate, furthermore, Yoshimura teaches an interposer (col. 51, line 51).

However Yoshimura does not teach an interposer as a heat spreader.

Sizer, II teaches an interposer as a heat spreader (Fig. 2; 126) for the purpose of dissipating loss power to heat away from the optical device.

**The motivation** for providing an interposer as a heat spreader is for the purpose of manufacturing a compact unit and heat dissipation in a compact unit is critical to prevent damage to the unit.

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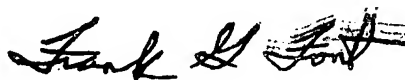
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin D Chiem  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Primary Examiner  
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